

DELTA PROTECTION COMMISSION

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**AGENDA ITEM # 10**

November 19, 1998

To: Delta Protection Commission
From: Lori Clamurro, Delta Protection Commission Staff
Re: Chinese Mitten Crabs Q&A Sheet

Q: What is the current population of Chinese mitten crabs in the Delta?

A: The number of crabs in the Bay and Delta is not known. They were introduced into San Francisco Bay about ten years ago, and began showing up at the U.S. Bureau of Reclamation's Tracy Fish Collection Facility three years ago. A total of four crabs were seen in 1996, a total of 20,000 were seen in 1997, and about 20,000 crabs per day at the height of the migration were seen in 1998.

Q: What is the known geographical distribution of the mitten crabs?

A: Mitten crabs are abundant in the Bay and Delta; as of July 1998, the known distribution of the mitten crabs extends well north, south, and east of the Delta. In 1998, crabs were reported north of Marysville, south in the San Luis Canal at the Dos Amigos Pumping Plant forebay, and east to Roseville. The crabs probably did not migrate any further upstream since July 1998, and have since migrated back to saltwater to reproduce.

Q: What do regulations currently say about possession of Chinese mitten crabs?

A: Title 14 of the California Code of Regulations states that it is illegal to import, transport, or possess live mitten crabs; you may possess a dead mitten crab. There are no bag or size limits, but methods of take for marine and inland waters differ.

Q: Is there or isn't there a lung fluke associated with the consumption of mitten crabs?

A: In a recent (1997) study, only about 25 mitten crabs were sampled, and no lung fluke was found, but there is currently not enough data to confirm or deny that the fluke is present in mitten crabs in the Bay-Delta system. The mitten crab is a secondary host for the Oriental lung fluke; mammals (humans), as final host, become infested by eating raw or poorly cooked crabs. To date, neither the fluke nor the freshwater snails that serve as the primary intermediate host for the fluke have been found in the Bay-Delta estuary; however, several species of freshwater snails which *could* possibly serve as intermediate host are present in the estuary.

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Q: Are there any known predators to the mitten crab?

A: White sturgeon, striped bass, bullfrogs, loons, and egrets have been known to eat the crabs; it is assumed that other predatory fishes (large mouth bass, larger sunfishes), river otters, racoons, and other wading birds may consume them as well.

Q: Do the crabs pose a threat to levees?

A: Yes; the burrowing activity may accelerate the erosion of banks and levees. Studies have documented burrowing of 8"-12" deep.

The crabs also pose a threat to rice crops. In Korea and China, juvenile mitten crabs have been observed consuming young rice shoots and burrowing in rice field levees.

Q: What efforts are being made to address the problem?

A: The U.S. Bureau of Reclamation (USBR) held a multi-agency meeting on the Chinese mitten crab on September 30, 1998, after experiencing severe problems with fish salvage operations at their Tracy pumping plant. The objective was to formulate recommendations on fish salvage, disposal, and research needs to address the mitten crab problem. Among the recommendations is the development of a Clearinghouse of Information to make coordination possible.

CALFED has set up a Non-Native Invasive Species (NIS) Technical Team, which has been directed to write up a Strategic Plan and Implementation Plan to direct proposal solicitation, designated actions, and/or expansion of existing programs dealing with NIS. The National Aquatic Nuisance Species (ANS) Task Force could provide funding assistance for state projects dealing with aquatic species; the group would also be receiving funding set aside by CALFED to administer and review projects dealing with terrestrial as well as aquatic plants and organisms. The mitten crab is a high priority species for study and action.

U.S. Fish and Wildlife Service, the Western Regional Panel of the ANS Task Force, and the San Francisco Estuary Project are sponsoring a mitten crab workshop on March 23, 1999. There will be a presentation on the life history and biology of the crabs, as well as information on control efforts and research projects.

Sources: The information on this sheet was obtained from correspondence with Kathy Hieb, Department of Fish and Game; Kim Webb, U.S. Fish and Wildlife Service; and Jeff Janik, Department of Water Resources; from the Interagency Ecological Program's Summer 1998 Newsletter; and from the information provided by Commissioner Broddrick at the September Commission meeting.
